

WHAT IS CLAIMED IS:

1. A beam used for separating and extracting a minute micro-sample from a specimen substrate in vacuum space, the beam, comprising: a plurality of branch
5 beams disposed at a tip of the beam, the beam being configured such that the minute micro-sample to be separated and extracted is sandwiched and held between the plurality of the branch beams.

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Am 10 2. A beam, comprising: a first holding member; and a rod-like member exchangeably fitted with the first holding member, and having a shape portion in which its tip is formed thinner as compared with its root, and the tip is split into a plurality of units, the beam being configured such that a micro-sample is
15 sandwiched and held in the split shape portion, and by extracting the sandwiched and held micro-sample from between the split shape portion, the micro-sample can be detached and separated from the beam.

20 3. An equipment for specimen fabrication, comprising: a microscope, a stage for mounting a specimen thereon, a sample hold system having a beam in a tip-split shape, for press-fitting a minute micro-sample thereinto, and extracting the minute micro-sample from the specimen mounted on the stage, and a
25 control system for transferring the position of, and rotating the beam.

4. An equipment for specimen fabrication, comprising: a microscope, a stage for mounting a

specimen thereon, a sample hold system having a beam in a tip-split shape, for press-fitting a minute micro-sample thereinto, and extracting the minute micro-sample from the specimen mounted on the stage, a
5 detector for detecting that the beam has come into contact with the micro-sample, and a driver for transferring the beam in the direction of the stage in a prescribed amount based on a signal from the detector.

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10 5. The equipment for specimen fabrication according to claim 3 or 4, wherein particularly, the microscope is at least any of an optical microscope, a scanning electron microscope, and a scanning ion microscope.

15 6. A method for specimen fabrication, comprising the steps of: mounting the specimen on a stage; subjecting the specimen to cutting processing; bringing a beam having a tip-split shape for extracting the processed specimen into contact with the processed micro-sample, for holding; and separating the processed
20 micro-sample from the specimen.

25 7. The method for specimen fabrication according to claim 6, further comprising the steps of: transferring the micro-sample held by the beam onto a micro-sample holder for mounting the micro-sample thereon; mounting or holding the micro-sample on the micro-sample holder; and extracting the beam from the micro-sample, and separating the beam therefrom.

8. A method for specimen fabrication,

comprising the steps of: mounting a specimen substrate on a stage; subjecting the specimen substrate to cutting processing; separating and extracting a micro-sample from the specimen substrate by using a beam having a tip-split shape; processing the extracted micro-sample through irradiation with a charged beam; and storing the processed micro-sample in a mounting holder on the specimen stage.

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9. An equipment for specimen fabrication, comprising: a charged particle beam source; an optical means for converging a beam from the charged particle beam source; a specimen stage for mounting a specimen to be irradiated with the converged beam; and a sample hold system having a system rotating with the tip split, mounted obliquely above the specimen stage.

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10. An equipment for specimen fabrication, comprising: an ion beam source; an objective lens for irradiating a beam from the ion beam source to a specimen; a specimen stage for mounting the specimen thereon; and a conical metal beam with its tip split, for handling a micro-sample within a range of from 15 degrees to 65 degrees relative to the specimen stage surface.

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